L6360 AND L6362A

Embracing the Industry 4.0 revolution

Master and device solution for IO-Link and general-purpose (SIO-mode) transceivers

ST's L6360 and L6362A enable a master and device solution for IO-Link and general-purpose transceivers via a single 3-wire connection (PHY2). They represent a compact, efficient and robust solution for Smart Industry (Industry 4.0) applications.

The two monolithic ICs meet all the requirements of modern sensors and actuators such as fast and easy configurability, wide application spectrum, minimum power dissipation for increased efficiency and full diagnostic and protection functions for enhanced reliability.

KEY FEATURES & BENEFITS

Wide application spectrum

- Wide supply voltage range: 18 to 32.5 V (L6360), 7 to 36 V (L6362A)
- High output current capability: up to 500 mA (L6360), 220 mA (L6362A)

Maximum design flexibility

- Selectable output stage: high-side, low-side, push-pull
- Easy access and full configurability in I2C mode with L6360
- Selectable linear regulators: 3.3 / 5 V, 50 mA (L6360), 10 mA (L6362A)

Maximum efficiency

- Minimum power dissipation with best-in-class RDS(on) <1.6 Ω (L6362A), <2 Ω (L6360)

Maximum reliability

- LED diagnostics sequence generator for fast reaction to faults conditions in L6360
- Integrated short circuit, over-current & over-temperature and over-voltage & under-voltage protection functions

IDEAL FOR

- Driving digital sensors and actuators
- Input-output for programmable logic controllers (PLC)
- Line drivers

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STMicroelectronics' L6360 and L6362A transceivers transmit and receive digital data via a single 3-wire connection (PHY2) supporting COM1 (4.8 kbaud), COM2 (38.4 kbaud) and COM3 (230.4 kbaud) modes.
Both devices integrate a selectable linear regulator.

In the master L6360 a fast mode I²C bus makes the system highly configurable and easily programmable.

High reliability is provided through programmable cut-off current, delay time, restart delay and filter time on the C/Qi digital. In addition,current limitation and thermal shutdown, protect the ICs against overload and short circuit, for safe operation.

Supply voltage is monitored and low voltage conditions are detected. The devices are housed in tiny packages: L6360 in a 26-lead QFN (3.5 x 5 x 1 mm) and L6362A in a 12-lead DFN (3 x 3 x 1 mm).

They are compliant with burst tests, surge tests and ESD immunity tests, based on the IO-Link specification and SIO mode requirements thus representing an ideal solution for driving digital sensors in Industry 4.0 applications.
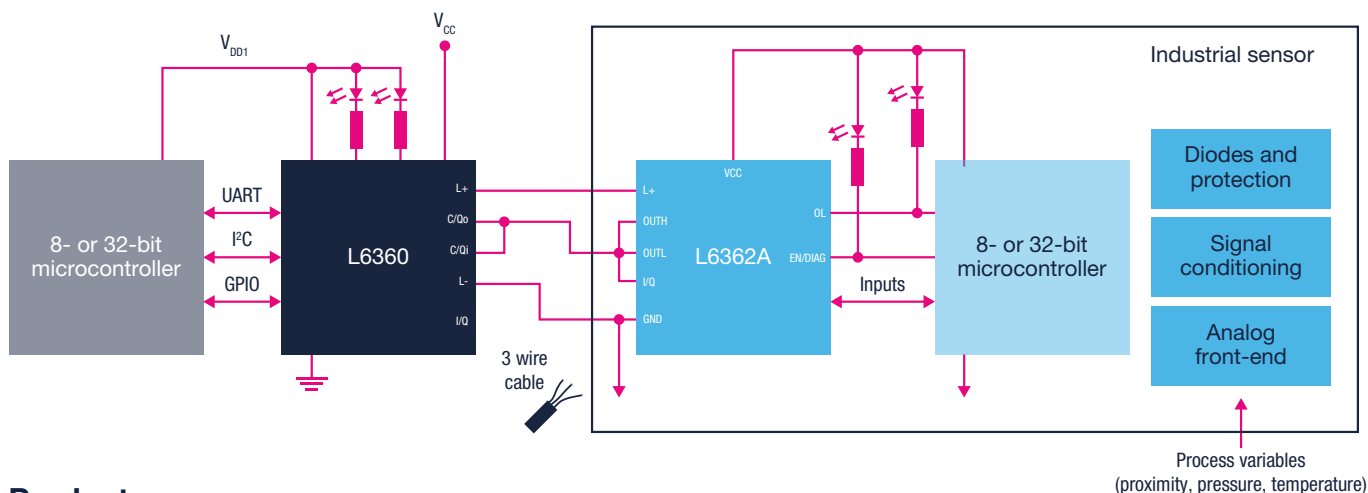
Product range

Part number	Supply voltage (V)	VDD (V)	Output current (A)	Linear regulator output current (mA)	Output channels	Input channels	Package
L6360 (Master)	18 to 32.5	3.3/5	0.5	50	2	2	QFN 26L (3.5x5 mm)
L6362A (Device)	7 to 36	3.3/5	0.22	10	1	1	DFN 12L (3x3 mm)

Evaluation boards

L6360	
Order code	Description
P-NUCLEO-IOM01M1	STM32 Nucleo Pack for IO-Link master with IO-Link v1.1 (PHY and stack)
STEVAL-IOM001V1	IO-Link (PHY) master evaluation board based on L6360 with ST morpho connectors for STM32 Nucleo
STEVAL-IFP016V2	IO-Link communication master transceiver evaluation board based on the L6360
STEVAL-IDP004V2	IO-Link master multi-port evaluation board based on L6360

L6362A	
Order code	Description
P-NUCLEO-IOD01A1	STM32 Nucleo Pack for IO-Link device with IO-Link v1.1 (PHY and stack)
STEVAL-IOD003V1	IO-Link (PHY) device evaluation board based on L6362A with Arduino connectors for STM32 Nucleo
STEVAL-IFP017V3	IO-Link communication transceiver evaluation board based on the L6362A
STEVAL-IDP003V1	IO-Link industrial modular sensor board based on L6362A

Order code: FL6360X0920

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